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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,638	09/09/2004	Taiichi Okada	TIP-04-1178	2464
35811 7590 11/08/2007 IP GROUP OF DLA PIPER US LLP ONE LIBERTY PLACE 1650 MARKET ST, SUITE 4900 PHILADELPHIA, PA 19103				
EXAMINER JOHNSON, JENNA LEIGH				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
11/08/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/501,638

Applicant(s)

OKADA, TAIICHI

Examiner

Jenna-Leigh Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 4, 5 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/5508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 23, 2007 and August 14, 2007 has been entered.

Response to Amendment

2. The responses submitted on July 23, 2007 and August 14, 2007, have been entered. Claims 3 and 6 – 10 have been cancelled. Claims 1 and 11 have been amended. Therefore, the pending claims are 1, 2, 4, 5, and 11.
3. The amendment to the specification filed on July 23, 2007 have been entered.
4. The 35 USC 103 rejection based on JP 07-252740 A and Veiga (5,989,660) is withdrawn since the references fails to teach applying a silicone resin coating to the fabric.
5. The 35 USC 103 rejection based on JP 07-252740 A and Li et al. (5,897,929) is withdrawn since the references fails to teach applying a silicone resin coating to the fabric. However, a new rejection based on JP 07-252740 A is set forth below.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1, 2, 4, 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-252740 A (English Translation) in view of Kami et al. (6,283,507).

JP 07-252740A discloses a yarn for use in airbags having a total yarn size of 180 to 450 denier, made from filaments having a degree of compression of 1.5 or more and a filament size of 0.1 to 7.0

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denier (constitution). The degree of compression is defined as the ratio of the major axis to the breadth, and is the same as the applicant's degree of flatness (paragraph 19). As shown in the figures, the cross section of the filament can take various shapes, including a rectangular fiber (which has a constant thickness), an elliptical fiber, and an elliptical fiber with grooves, as long as the filament has the desired degree of compression. The yarns are woven together to produce a fabric having a cover factor of 1500 – 2000 (paragraph 26).

JP 07-252740A discloses that the major axis of the single yarn should be placed parallel to the flat surface (or horizontal direction) of the fabric to decrease the gaps in the woven fabric, thus suppressing air permeability, or to produce a set air permeability from a lighter fabric, when compared to a fabric made from round fiber (page 10, paragraph 18). Thus, JP 07-252740A teaches that to maximize the advantage gained by using flattened fibers, one must make the fibers parallel or as close to parallel as possible. Therefore, it would have been obvious to one having ordinary skill in the art to optimize the HI of the fabric taught by JP 07-252740 A to have a HI of greater than 0.75 to increase the air permeability of the fabric made from flattened fibers to the greatest extent or to decrease the overall weight, as well as thickness, of the fabric to the greatest extent.

Further, JP 07-252740 A discloses that the fabric can be used to make an airbag fabric with or without a resin coating. However, JP 07-252740 A fails to teach the type and amount of resin added to the fabric. Kami et al. is drawn to light weight airbag fabrics. Kami et al. discloses that airbag fabrics can be coated with about 10 gsm or less of a heat resistant coating (column 9, lines 5 – 8). Further, Kami et al. discloses that silicone resins are preferred for improving mechanical properties of the woven fabric for heat resistant and the like (column 9, lines 15 – 25). Thus, it would have been obvious to one having ordinary skill in the art to apply a silicone coating, as taught by Kami et al., to the airbag fabric of JP 07-252740 A since Kami et al. discloses that the silicone coating is preferred for improving the mechanical properties of the woven fabric. Further, it would have been obvious to one having ordinary skill in the art

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to add the resin in an amount of about 10 gsm or less, as taught by Kami et al., to the fabric of JP 07-252740 A to produce a lightweight airbag fabric. Thus, claims 1, 2, and 11 are rejected.

With respect to claim 4, while JP 07-252740 A discloses that the thickness of the fibers are limited so that the fabric will not be too thick (paragraph 22), JP 07-252740 A fails to disclose the thickness of the fabric. However, based on the teachings of JP 07-252740 A that the fabric should be lightweight and flexible as well as using small fibers and yarns, so that the overall thickness of the fiber is limited (paragraph 22). Therefore, it would have been obvious to one having ordinary skill in the art to optimize the thickness of the fabric to produce a fabric with the claimed thickness. Further, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the fabric thickness, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Although JP 07-252740 A does not explicitly teach the limitations tensile strength, tear strength, and permeability, it is reasonable to presume that said limitations are met by the coated woven fabric produced by the combination of JP 07-252740 A and Kami et al. Support for said presumption is found in the use of similar materials (i.e. warp and weft yarns comprising flattened filaments) and in the similar production steps (i.e. weaving the yarns to form a woven fabric) used to produce an airbag. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In the alternative, the claimed tensile strength, tear strength and permeability would obviously have been provided by the process disclosed by JP 07-252740 A and Kami et al. Thus, claim 4 is rejected.

With regards to claim 5, while JP 07-252740 A discloses using polyamide filaments, JP 07-252740 A fails to teach the viscosity of the polyamide material relative to sulfuric acid. However, it would have been obvious to one of ordinary skill in the art to choose the claimed viscosity since one of ordinary skill in the art would be motivated to choose a polyamide which has a viscosity such that the

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polymer will easily be processed during extrusion to form the desired meltspun fibers. Thus, it would only involve routine skill in the art to choose the viscosity of the polymer and it would have been obvious to one of ordinary skill in the art to optimize the viscosity of the polymer so that the extrusion process is efficient producing the continuous filaments without an excessive number of breaks during extrusion. Thus, claim 5 is also rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Johnson whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jlj
November 6, 2007

/Jenna-Leigh Johnson/
Primary Examiner, Art Unit 1794